

C	altrans
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	DISI.	COUNTY	ROUTE	TOTAL PROJECT	NO.	SHEETS	
	7	LA	5,605,91	VAR	2	52	
_	The Sta	te of Californi	a or its offic	ers or agents shall not be i	esponsible	for the	

accuracy or completeness of electronic copies of this plan sheet.

Pipe inlet			To accompany plans dated
Grate Details  Biovale Proof Grate Details			
Bicycle Proof Grate Details  Alternative Higged Cover for Type OL and OS Inlets and Trash			
Alternative Hinged Cover for Type OL and OS Inlets and Trash Rack for Type OCP Inlet		<b>.</b>	Transfer Contract Con
Gutter Depressions		1 1 1	Traffic Control System for Lane Closure on Multilane Conventional Highways
Precast Reinforced Concrete Pipe- Direct Design Method	о т	Γ12	Traffic Control System for Lane Closure on Multilane
Cast-In-Place Reinforced Concrete Single Box Culvert			Conventional Highways
Cast-In-Place Reinforced Concrete Double Box Culvert	□⊤	ГІЗ	Traffic Control System for Lane Closure on Two Lane
Cast-In-Place Reinforced Concrete Box Culvert Miscellaneous	·		Conventional Highways
Details		Г I 4	Traffic Control System for Ramp Closures
Box Culvert Wingwalls- Types A,B and C		Г15	Traffic Control System for Moving Lane Closure on
Box Culvert Wingwalls- Types D and E	_		Multilane Highways
Box Culvert Warped Wingwalls		116	Traffic Control System for Moving Lane Closure on
Pipe Culvert Headwalls, Endwalls and Warped Wingwalls	_ т	Г 1 7	Multilane Highways Traffic Control System for Moving Lane Closure on
Arch Culvert Headwalls, Endwalls and Warped Wingwalls		1 1 (	Two Lane Highways
Overside Drains			· · · · · · · · · · · · · · · · · · ·
Overside Drains			BRIDGE
Underdrains	□в	30 - I	Bridge Details
Construction Loads on Culverts	□В	30-3	Bridge Details
Strut Details for Structural Steel Plate Pipes, Arches, and Vehicular Undercrossings		30-5	Bridge Details
Pipe Headwalls		30-13	Bridge Details
Pipe Culvert Headwalls, Endwalls and Wingwalls- Types A,B and C		32-3	400 mm Cast-In-Drilled-Hole Concrete Pile
Pipe Riser Connections		32-5	Pile Details- Class 400 and Class 625
Drainage Inlet Riser Connections	□В	32-6	Pile Details- Class 400C and Class 625C
Pipe Riser with Debris Rack Cage	□В	32-8	Pile Details- Class 900 and Class 900C
Metal and Plastic Flared End Sections	□В	32-9	Load Test Pile Details (I)
Concrete Flared End Sections	□В	32-10	Load Test Pile Details (2)
Concrete Arch Culverts	□В	32-11	Load Test Pile Details (3)
Corrugated Metal Pipe Coupling Details No. I- Annular Coupling	□В	33-I	Retaining Wall Type I- H=1200 Through 9100 mm
Band Bar and Strap and Angle Connectors	□В	33-2	Retaining Wall Type I- H=9700 Through IO 900 mm
Corrugated Metal Pipe Coupling Details No. 2- Hat Band Coupler	□В	33-3	Retaining Wall- Type IA
and Flange Details		33-4	Retaining Wall- Type 2
Corrugated Metal Pipe Coupling Details No. 3- Helical and		33-5	Counterfort Retaining Wall- Type 3
Universal Couplers		33-6	Counterfort Retaining Wall- Type 4
Corrugated Metal Pipe Coupling Details No. 4- Hugger Coupling Bands		33-7	Retaining Wall- Type 5
Corrugated Metal Pipe Coupling Details No. 5- Standard Joint		33-8	Retaining Wall Details No. I
Corrugated Metal Pipe Coupling Details No. 6- Positive Joint		33-9	Retaining Wall Details No. 2
Corrugated Metal Pipe Coupling Details No. 7- Positive Joints		33-11	Retaining Wall Type 6- 1829 mm Maximum
and Downdrains		36-I	T-Beam Details
Reinforced Concrete Pipe or Non-Reinforced Concrete Pipe		36-10 36-21	Utility Openings, T-Beam
Standard and Positive Joints		36-21 37-1	Joint Seals (Maximum Movement Rating = 50 mm)  Box Girder Details
Slotted Corrugated Steel Pipe Drain Details		37-1 37-5	Deck Drains
Slotted Corrugated Steel Pipe Drain Details			Deck Drains- Type D-1 and D-2
Structural Section Drainage System Details			Utility Opening- Box Girder
Edge Drain Outlet and Vent Details			Utility Details
Edge Drain Cleanout and Vent Details			Cast-In-Place Prestressed Girder Details
Cross Drain Interceptor Details			Chain Link Railing
HIGHWAY PLANTING			Cable Railing
Planting and Irrigation- Abbreviations			Tubular Hand Railing
Planting and Irrigation- Symbols			Chain Link Railing Type 7
Planting and Irrigation- Details			Concrete Barrier Type 25
Planting and Irrigation- Details			Concrete Barrier Type 26
Planting and Irrigation- Details			Slope Protection Detail No. I
Planting and Irrigation- Details	□ В	313-2	Slope Protection Detail No. 2
Planting and Irrigation- Details	□В	3   4 -	Structural Steel Plate Vehicular Undercrossing
Planting and Irrigation- Details	□В	314-3	
TEU-DOD 18::			than 103 mm Diameter)
TEMPORARY FACILITIES			Water Supply Line (Bridge) (Pipe less than NPS 4)
Temporary Crash Cushion, Sand Filled	□В	314-5	Water Supply Line (Details) (Pipe less than NPS 4)
Temporary Crash Cushion, Sand Filled			
Temporary Railing (Type K)	AS	BU	ILT
Temporary Traffic Screen		-	
Construction Project Funding Identification Signs			SHEET 1 OF 2
Traffic Control System for Lane Closure on Freeways and			
Expressways Traffic Control System for Land and Complete Clasures on	Ву	·	STANDARD PLANS LIST
Traffic Control System for Lane and Complete Closures on		N	MAY 26, 2000 (July,1995 Edition)

**GENERAL ROAD WORK** 

MISCELLANEOUS ■ AIOA Abbreviations

■ AIOB Symbols

□ A20A Pavement Markers and Traffic Lines, Typical Details □ A20B Pavement Markers and Traffic Lines, Typical Details

□ A20C Pavement Markers and Traffic Lines, Typical Details □ A20D Pavement Markers and Traffic Lines, Typical Details

□ A24A Pavement Markings- Arrows Pavement Markings- Arrows □ ∆24B

□ A24C Pavement Markings- Symbols and Numerals Pavement Markings- Words □ A24D

Pavement Markings- Words and Crosswalks □ A24E □ A35A Portland Cement Concrete Paving Details

□ A40 Rumble Strip Details □ A62A Excavation and Backfill- Miscellaneous Details

□ A62B Limits of Payment for Excavation and Backfill Bridge- Surcharge

□ A62C Limits of Payment for Excavation and Backfill- Bridge □ A62D Excavation and Backfill- Concrete Pipe Culverts

Excavation and Backfill- Cast-In-Place Reinforced Concrete Box □ A62E and Arch Culverts

□ A62F Excavation and Backfill- Metal and Plastic Culverts

□ A73A Object Markers □ A73B Markers

■ A73C Delineators, Channelizers and Barricades

□ A74 Survey Monuments □ A75A Concrete Barrier Type 50

□ A75B Concrete Barrier Type 50F □ A75D Concrete Headlight Glare Screen

■ A77A Metal Beam Guard Railing ■ A77B Metal Beam Guard Railing- Standard Hardware

■ A77C Metal Beam Guard Railing- Posts and Blocks

□ A77D Guard Rail Flares ■ A77E Guard Rail Flares

Metal Beam Guard Railing- Miscellaneous Details

Guard Rail End Anchors (Breakaway) ■ A77H Guard Rail End Anchors (Breakaway Hardware)

■ A771 Barrier and Guard Rail End Anchors

□ A77J Guard Rail Connections to Bridge Rails, Retaining Walls and Abutments

■ A77K Guard Rail Connections to Bridge Sidewalks and Curbs □ A78A Thrie Beam Barrier Thrie Beam Barrier- Standard Hardware and Miscellaneous Details

Thrie Beam Barrier- End Anchors

□ A78D Thrie Beam Barrier Connection to Concrete Barrier Type 50 □ A78E Thrie Beam Barrier Connections to Bridge Rails □ D98A

□ A78F Thrie Beam Barrier Connections to Bridge Curbs, Retaining Walls and Abutments □ A80

Thrie Beam Barrier Emergency Passageway ■ A81 Crash Cushion. Sand Filled

Portable Scale Pad and Approach Slab Details A85 Chain Link Fence

□ A86 Barbed Wire and Wire Mesh Fences □ A87 Curbs, Dikes and Driveways

□ C.7A

□ C7B

□ D72

CRIB WALLS Reinforced Concrete Crib Wall- Battered Wall- Types A, B and C

The Standard Plan sheets applicable to this contract include, but are not limited to those indicated by a marked box.

Reinforced Concrete Crib Wall- Battered Wall- Types D.E and F

Reinforced Concrete Crib Wall- Vertical Wall- Types A,B and C □ C7D Reinforced Concrete Crib Wall- Vertical Wall- Types D.E and F Reinforced Concrete Crib Wall- Types A, B, C, D, E and F-Header

□ C7E and Stretcher Details □ C7F Design Data for Reinforced Concrete Crib Wall Foundation Pressure-Battered Wall

□ C7G Reinforced Concrete Crib Wall Foundation Pressure-Vertical Wall □ C8A Steel Crib Wall- Construction Details

□ C8B Steel Crib Wall- Design Data □ C8C Steel Crib Wall- Design Data □ C9A Timber Crib Wall- Types A,B,C and D □ C9B Timber Crib Wall- Types A, B, C and D-Design Data

> DRAINAGE Drainage Inlets

□ H3 □ H4 □ H5

□ H6 П Н7 □ H8

□ D73 Drainage Inlets

☐ D74A Drainage Inlets

☐ D74B Drainage Inlets

■ D75

■ D77A

■ D77B

□ D77C

□ D78

□ D79

□ D80

□ D81

□ D82

□ D84

□ D85

□ D86A ■ D86B

□ D86C

□ D87A

□ D87B

□ D87C

□ D88A

■ D89

■ D93B

■ D93C

□ D94A

□ D94B

■ D97A

■ D97B

■ D97C

■ D97D

■ D97E

■ D97G

■ D97H

□ D98B

□ D99A

□ D99B

□ D99C

□ D99D

□ HI

□ H2

D97F

□ D95

D90

D93A

□ D88

☐ D74C Drainage Inlets Details

ΤI Τ2 Т3

Τ4 □ T7 □ TIO

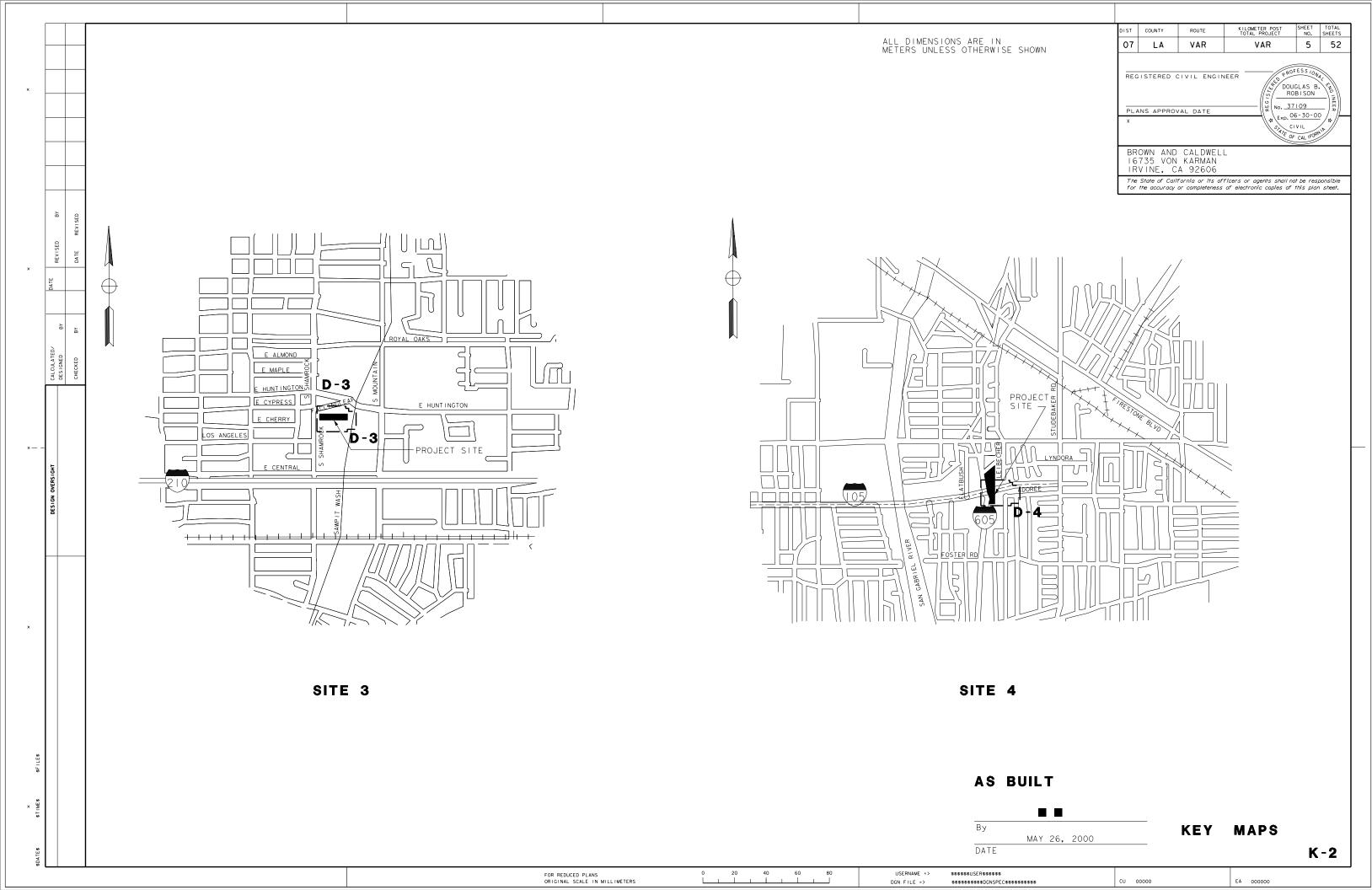
□ TIOA Traffic Control System for Lane and Complete Closures on Freeways and Expressways

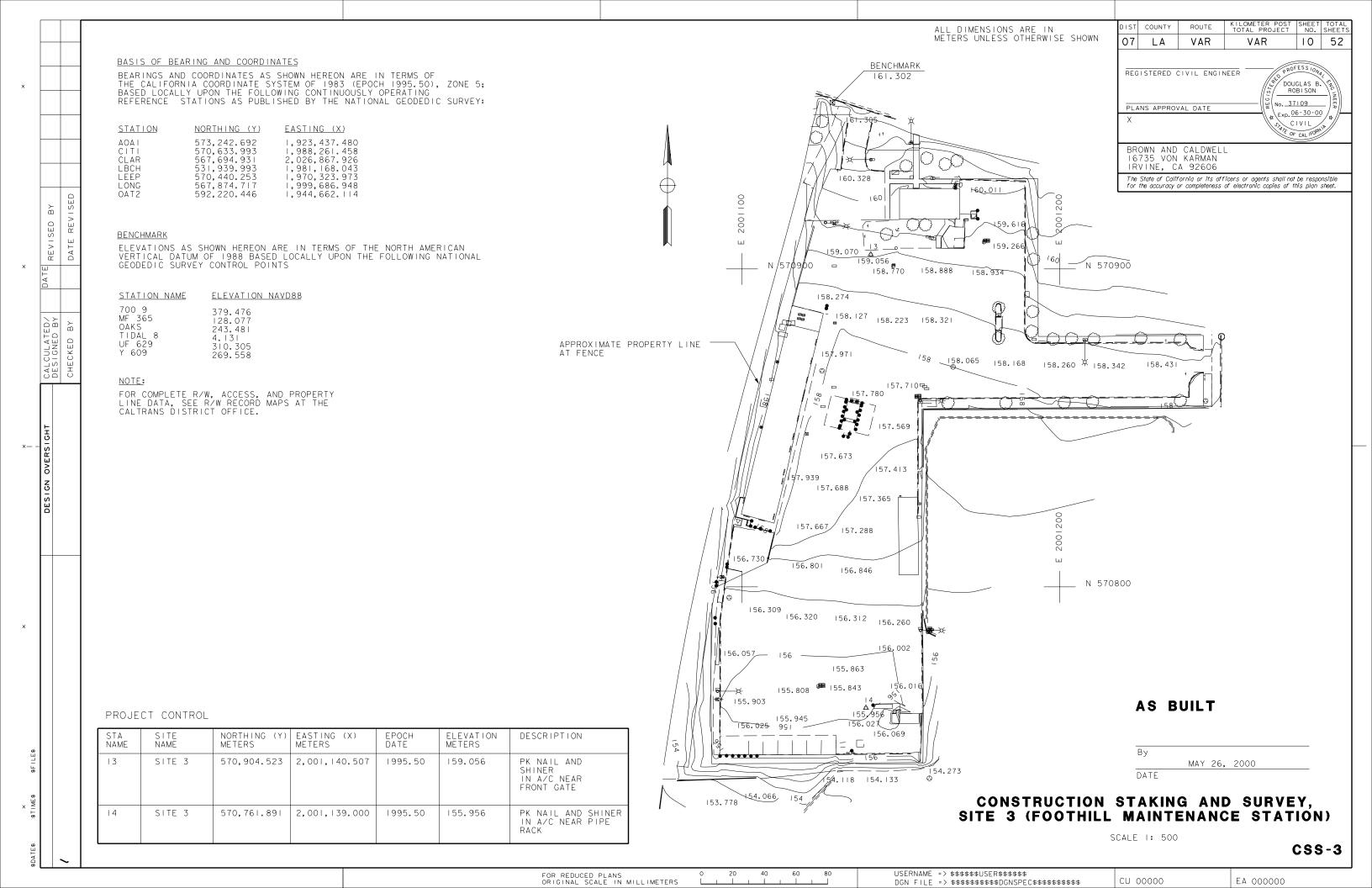
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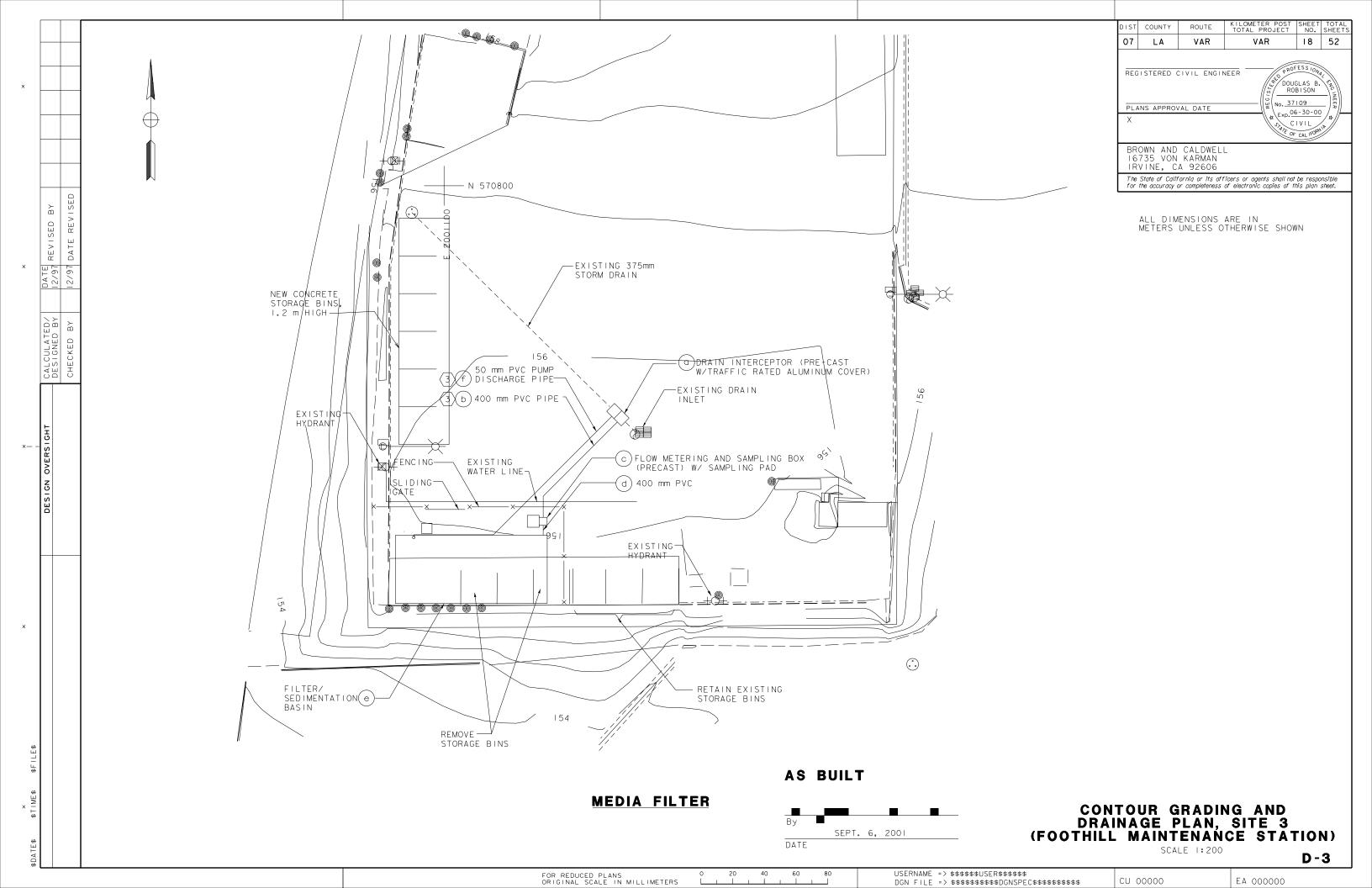
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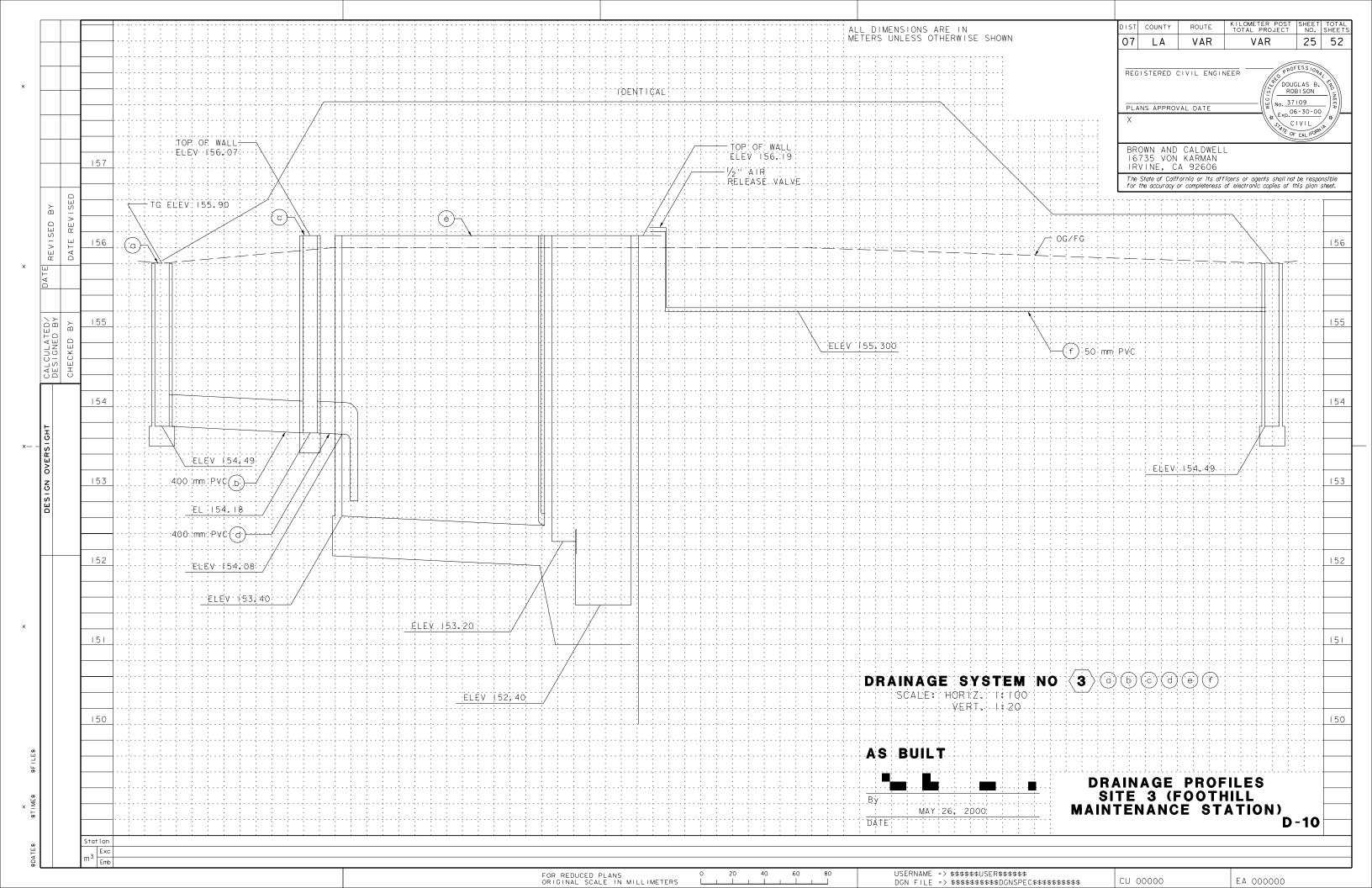
COUNTY

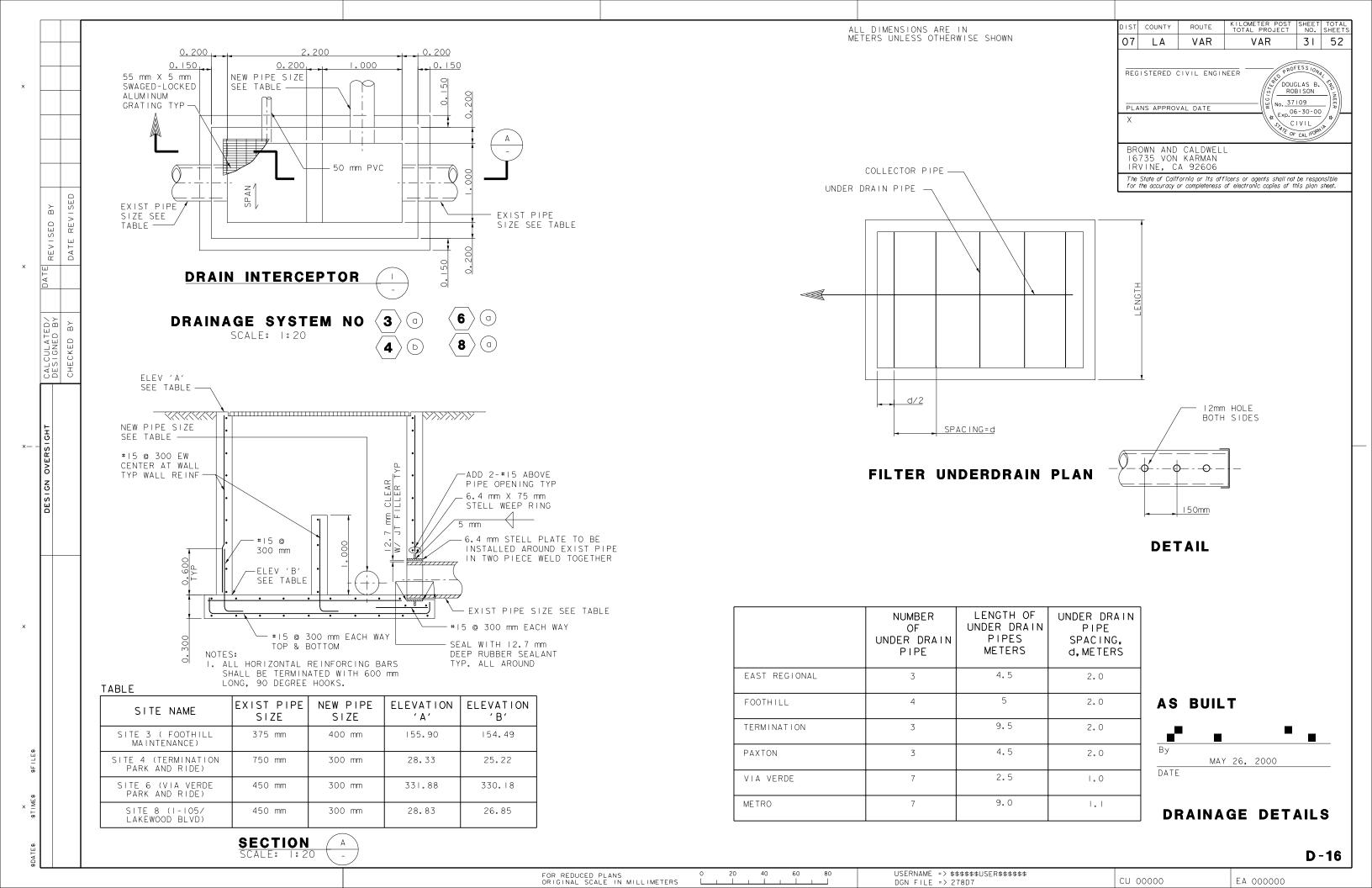
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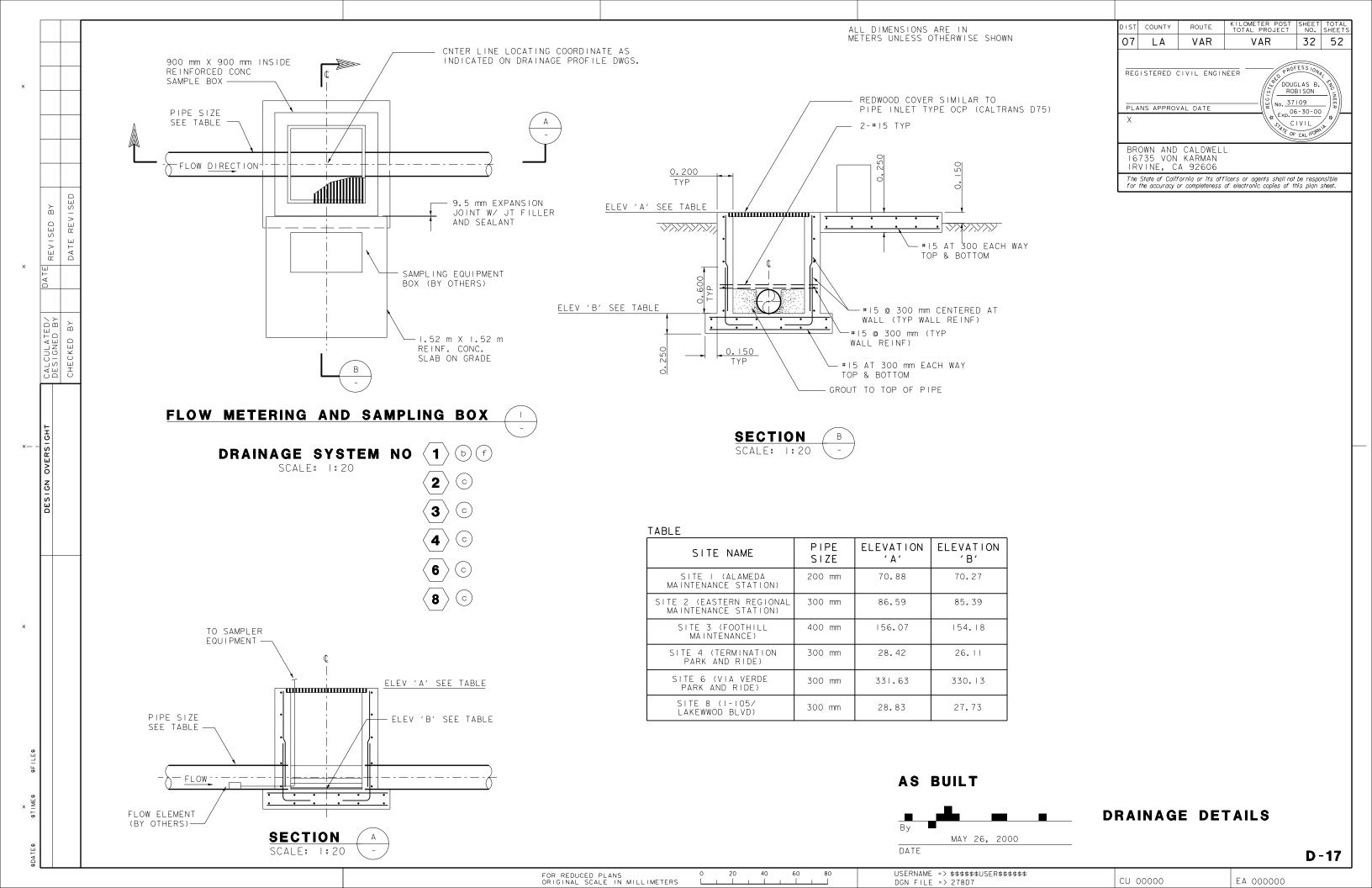


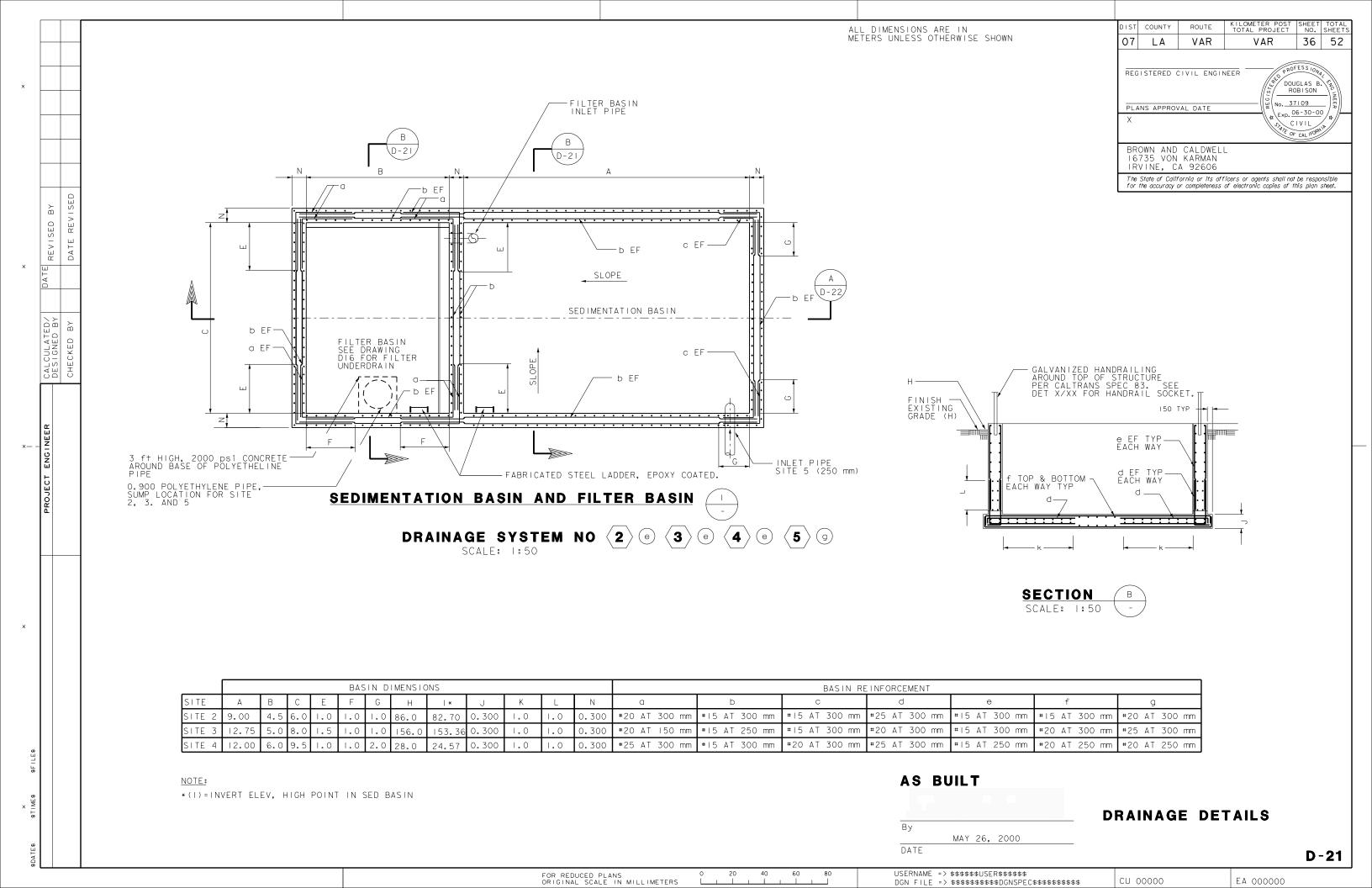


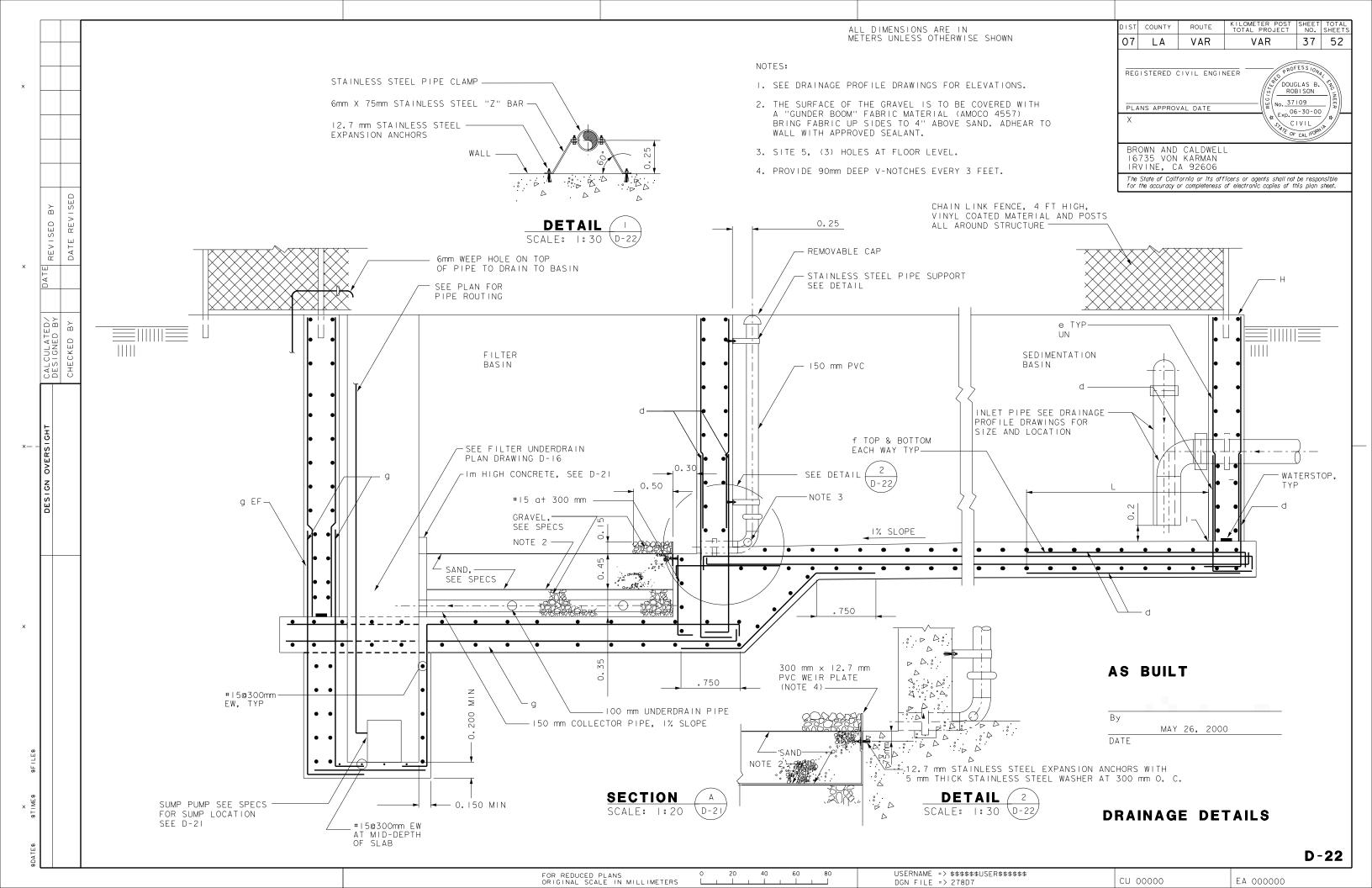












		GENERAL		
		G1 <u>SCOPE</u> THE GENERAL NOTES AND TYPICAL DETAILS ARE GENERAL  AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE  SPECIFIC INDICATIONS TO THE CONTRARY.	C7	S B RI
		G2 APPLICABLE SPECIFICATIONS AND CODES  CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 1994  EDITION OF THE UNIFORM BUILDING CODE (UBC). THE ABOVE SHALL  GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR THE  FOLLOWING NOTES ARE MORE RESTRICTIVE.	C8	SI Mi SI UI
BY	ISED	G3 <u>ALTERNATIVE DESIGNS</u> THE STRUCTURAL SYSTEMS AND DETAILS ON THESE PLANS ARE THE PRIORITY DESIGN. ALTERNATIVE SYSTEMS AND DETAILS MAY BE USED IF THE CONTRACTOR SUBMITS PLANS WITH SUBSTANTIATING CALCULATIONS AND TEST DATA, AND IF THE ALTERNATIVE PLANS ARE ACCEPTED BY THE DISTRICT.	C9	GI CI SI M
REVISED	DATE REV	G4 <u>DIMENSIONS</u> STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.	ST1	AP ST PR
DATE		G5 PROVISIONS FOR EQUIPMENT  MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES,  OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUC-  TURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DRAWINGS  SHALL BE PROVIDED PRIOR TO CASTING CONCRETE.	ST2	MA AL ON OT
CULATED/		G6 CONSTRUCTION LOADS  STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON COMPLETED  STRUCTURES. STRUCTURES SHALL BE PROTECTED BY BRACING AND  SHORING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR  DURING CONSTRUCTION.	ST3	
CALC	H	G7 <u>DRAINAGE SURFACES</u> SLOPE DRAINAGE SURFACES UNIFORMLY TO DRAIN. SLOPE SHALL BE '/4" PER FOOT EXCEPT WHERE NOTED OTHERWISE ON THE PLANS.	ST4	ST GA BC
보		<u>CONCRETE</u>	ST5	<u>PA</u> ST
OVERSIGHT		C1 <u>applicable code</u> concrete construction shall conform to the 1995 edition of the aci building code (aci-318).		
DESIGN		C2 <u>REINFORCING STEEL DETAILS</u> ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315), LATEST EDITION.	A1 A2	ALI THI
		C3 <u>design stresses</u> A. concrete f'c =28 mpgi ultimate compressive stress at 28 days.		UNL 606 <u>ALL</u>
		B. REINFORCING STEEL (ASTM) A615M, GRADE 420, DEFORMED BARS		<b>₽</b> ₩₽ COV
		C4 <u>CONCRETE COVER</u> CONCRETE COVER FOR REINFORCING BARS SHALL BE 50mm FOR FORMED  SURFACES UNLESS SPECIFICALLY NOTED  OTHERWISE. FOOTINGS  AND FOUNDATION MATS CAST ON GROUND  SHALLBE 75mm.		
		C5 EXTRA ACCESSORY BARS  IN ADDITION TO NORMAL ACCESSORIES USED TO HOLD REINFORCING  STEEL FIRMLY IN POSITION, EXTRA ACCESSORY BARS SHALL BE  USED AS FOLLOWS:  A. IN SLABS #5 RAISER BARS AT 90mm 0/C MAXIMUM TO SUPPORT TOP  REINFORCING STEEL.  B. IN WALLS WITH TWO CURTAINS #3 U OR Z SHAPE SPACERS AT  1800mm 0/C EW.		
		C6 <u>BAR LAP SPLICES</u> DOWELS SHALL BE THE SAME SIZE AND SPACING AS BARS WITH WHICH THEY  ARE LAPPED UNLESS OTHERWISE NOTED. THE LAP SPLICES SHALL  BE 48 BAR DIAMETER MINIMUM AND STAGGERED. VERTICAL REINFORCING  BAR SPLICES IN COLUMNS SHALL HAVE AT LEAST 48 BAR DIAMETER LAP.		

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

C7 <u>STANDARD HOOKS</u>

BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF AC1-318.

C8 <u>SLOPING SLABS</u>
MONOLITHIC SLABS WITH TOPS THAT ARE SLOPED SHALL HAVE BOTTOMS
SLOPED THE SAME AMOUNT. MAINTAINING A UNIFORM SLAB THICKNESS.
UNLESS OTHERWISE SHOWN.

9 GROUND SUPPORTED SLABS

CONCRETE SLABS SUPPORTED BY GROUND, UNLESS OTHERWISE NOTED,

SHALL BE 150mm THICK REINFORCED WITH #15 @ 300mm AT

MID-DEPTH OF SLAB.

### STEEL

#### ST1 APPLICABLE CODE

STEEL CONSTRUCTION SHALL CONFORM TO SPECIFICATIONS AND STANDARDS PRESENTED IN THE NINTH EDITION OF AISC MANUAL OF STEEL CONSTRUCTION.

#### ST2 MATERIAL

ALL STRUCTURAL SHAPES, BARS, PLATES AND SHEETS INDICATED ON THE DRAWINGS SHALL BE STEEL MEETING ASTM A-36M, UNLESS OTHERWISE NOTED.

#### ST3 WELDING

WELDING SHALL CONFORM TO AWS CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDER SHALL BE CERTIFIED.

#### T4 ENCASED STEEL

STEEL COMPLETELY ENCASED IN CONCRETE SHALL NOT BE GALVANIZED OR PAINTED AND SHALL HAVE A CLEAN SURFACE FOR BONDING TO CONCRETE.

### STS PAINTING

STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS.

### ALUMINUM

#### 1 APPLICABLE CODE

ALUMINUM CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM CONSTRUCTION MANUAL OF THE ALUMINUM ASSOCIATION.

#### A2 MATERIA

UNLESS OTHERWISE INDICATED, STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6 AS SPECIFIED IN ASTM B-308M.

## A3 ALUMINUM IN CONTACT WITH CONCRETE

CONTACT SURFACES SHALL BE COATED WITH HEAVY ALKALI - RESISTANT WHERMINDURGES IN CONTACT WITH CONCRETE OR MASONRY SURFACES.

DIST COUNTY ROUTE KILOMETER POST SHEET TOTAL PROJECT NO. SHEET 507AL PROJECT NO. SHEET SHE

PLANS APPROVAL DATE

X

PLANS APPROVAL DATE

BROWN AND CALDWELL 16735 VON KARMAN IRVINE, CA 92606

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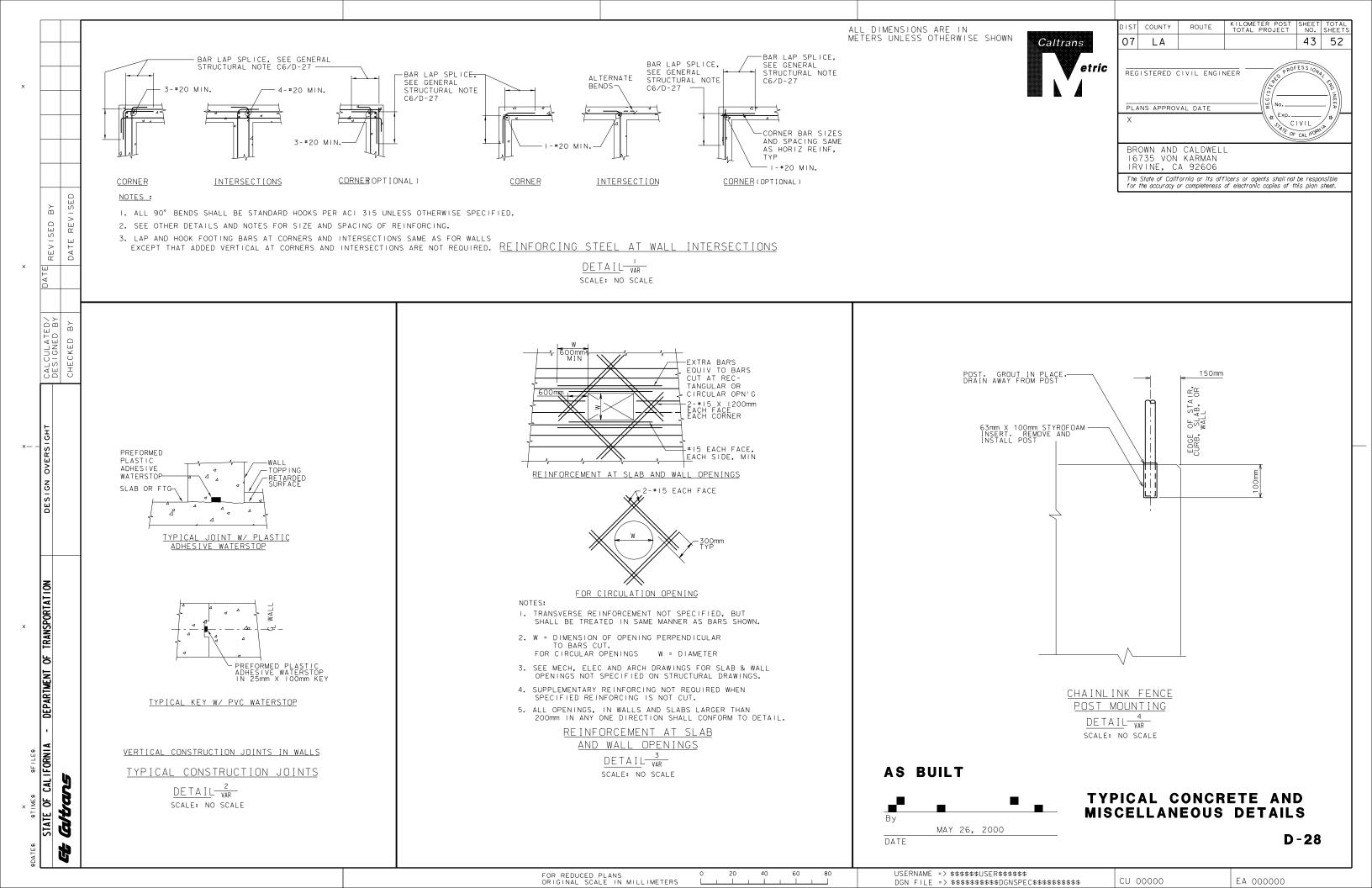
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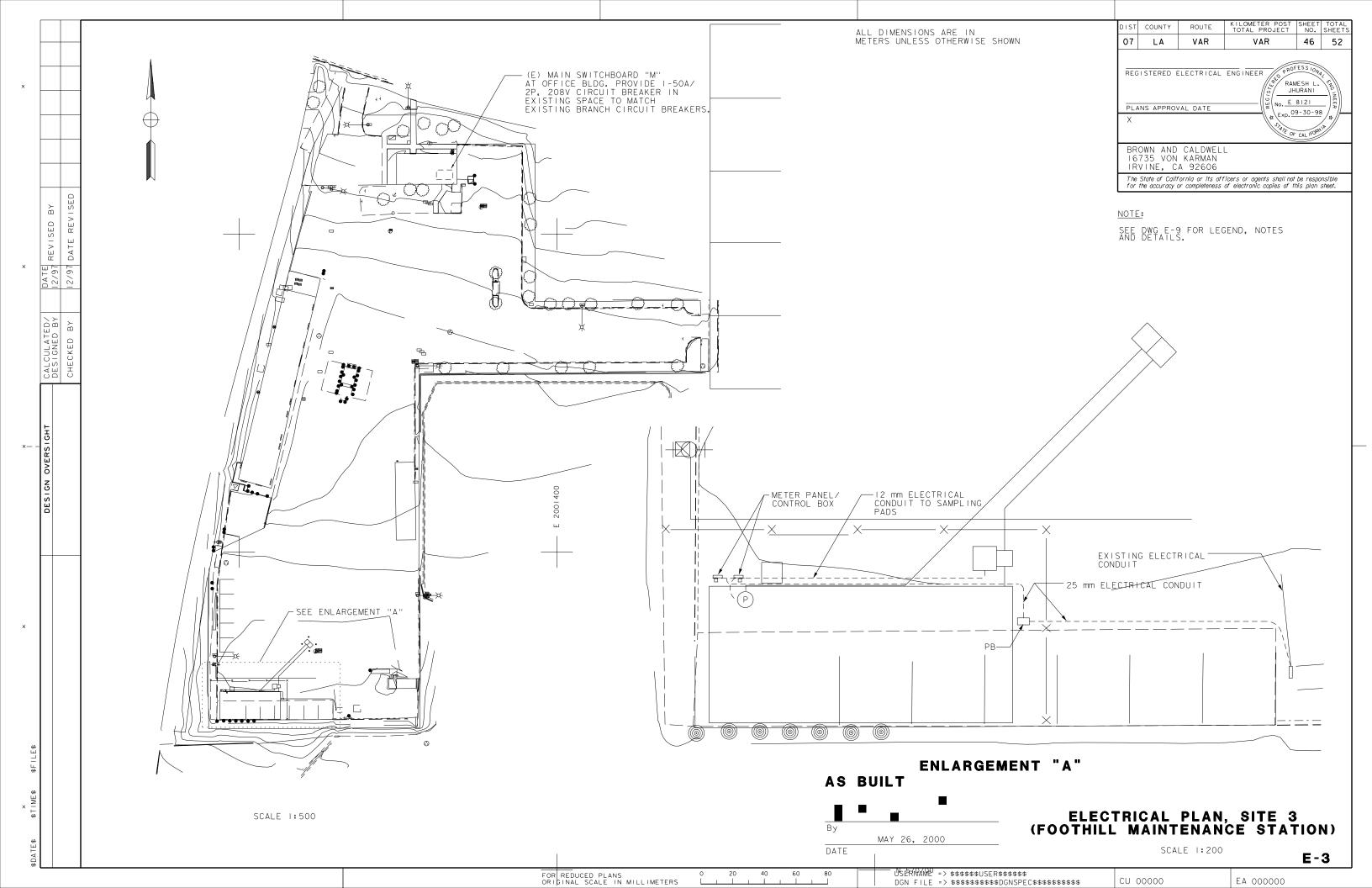
By MAY 26, 2000 DATE STRUCTURAL GENERAL NOTES

CU 00000

D-27

EA 000000





LEGEND: STANCHION MOUNTED JUNCTION BOX, WEATHERPROOF  $\biguplus_{\mathsf{WP}}$ STANCHION MOUNTED DUPLEX RECEPTACLE OUTLET, WEATHERPROOF EXISTING SWITCHBOARD/PANELBOARD AND CABINET SED В EXISTING ELECTRICAL EQUIPMENT REVISED DATE REV CROSS LINES INDICATES NUMBER OF #12 AWG. NO CROSS LINES INDICATES 2# 12 AWG, UNLESS OTHERWISE NOTED. ALL CONDUIT 1/2" UNLESS OTHERWISE NOTED P-1,3-- -//- **/-**HOMERUN TO PANELBOARD CIRCUIT NUMBERS --- MC --- CONDUIT, METALIC UNDERGROUND ---- E ---- EXISTING CONDUIT TO REMAIN CALC DESI CHEC STANCHION MOUNTED MOTOR STARTER FOR THE EFFLUENT PUMP, WEATHERPROOF EFFLUENT PUMP MOTOR WITH FLOAT SWITCH

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

### NOTES:

- TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100A METER, 100A, 120/240V, 1-PHASE, 3-WIRE 12-CIRCUIT PANELBOARD "P" WITH 50A/2P MAIN AND 1-30A/2P, 6-20A/IP BRANCH CIRCUIT
- FOR CONNECTION OF INFLUENT/IN-FLOW SAMPLER AND FLOW METER
- FOR CONNECTION OF EFFLUENT/OUT FLOW SAMPLER AND FLOW METER
- EFFLUENT PUMP MOTOR (208/230V, I-PHASE) WITH FLOAT
- NEMA SIZE I, 240V, I-PHASE MOTOR STARTER WITH H-O-A (HAND-OFF-AYTOMATIC) SWITCH FOR FLOAT CONTROL

DIST COUNTY 07 LΑ VAR 52 52

REGISTERED ELECTRICAL ENGINEER

PLANS APPROVAL DATE

No. E 8121 x Exp. 09-30-98 STATE OF CALIFORN

RAMESH L. JHURANI

BROWN AND CALDWELL 16735 VON KARMAN IRVINE, CA 92606

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AS BUILT

Ву MAY 26, 2000

DATE

**ELECTRICAL LEGEND, NOTES** AND DETAILS

E-9

FOR REDUCED PLANS ORIGINAL SCALE IN MILLIMETERS

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